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- 1 **The when, why and why not of the BETA programming language**
 Bent Bruun Kristensen, Ole Lehmann Madsen, Birger Møller-Pedersen
 June 2007 **HOPL III : Proceedings of the third ACM SIGPLAN conferen**
Publisher: ACM [Request Permissions](#)
 Full text available: [Mov \(52:30 MIN\)](#), [Pdf \(817.60 KB\)](#) Additional Information: [full cita](#)
Bibliometrics: Downloads (6 Weeks): 27, Downloads (12 Months): 315, Downl

This paper tells the story of the development of BETA: a programming l
 abstraction mechanism for each kind of program element (classes, type

Keywords: history of programming, object-oriented analysis, object-or
 programming, programming languages

- 2 **TraceBack: first fault diagnosis by reconstruction of distributed contr**
 Andrew Ayers, Richard Schooler, Chris Metcalf, Anant Agarwal, Junghwan J
 June 2005 **PLDI '05: Proceedings of the 2005 ACM SIGPLAN conferen**
Publisher: ACM [Request Permissions](#)
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Faults that occur in production systems are the most important faults to
 present in development environments. TraceBack provides debugging ir

Keywords: fault diagnosis, instrumentation

Also published in:

June 2005 **SIGPLAN Notices** Volume 40 Issue 6

- 3 **Bitfrost: the one laptop per child security model**
 Ivan Krstić, Simson L. Garfinkel
 July 2007 **SOUPS '07: Proceedings of the 3rd symposium on Usable p**
Publisher: ACM
 Full text available: [Pdf \(500.47 KB\)](#) Additional Information: [full citati](#)
Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 130, Downlo

We present an integrated security model for a low-cost laptop that will l
 Implemented on top of Linux operating system, the model is designed t

Keywords: Bitfrost, Linux, usability

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**Improving the reliability of commodity operating systems**

Michael M. Swift, Brian N. Bershad, Henry M. Levy

February 2005 **Transactions on Computer Systems (TOCS)** , Volume 23 I**Publisher:** ACM Request Permissions

Full text available: Pdf (459.98 KB)

Additional Information: full citati

Bibliometrics: Downloads (6 Weeks): 44, Downloads (12 Months): 400, Downl

Despite decades of research in extensible operating system technology, system failures. In Windows XP, for example, drivers account for 85&pe

Keywords: I/O, Recovery, device drivers, protection, virtual memory

5

Improving the reliability of commodity operating systems

Michael M. Swift, Brian N. Bershad, Henry M. Levy

December 2003 **SOSP '03: Proceedings of the nineteenth ACM symposium****Publisher:** ACM Request Permissions

Full text available: Pdf (262.78 KB)

Additional Information: full citati

Bibliometrics: Downloads (6 Weeks): 27, Downloads (12 Months): 384, Downl

Despite decades of research in extensible operating system technology, system failures. In Windows XP, for example, drivers account for 85% c

Keywords: I/O, device drivers, protection, recovery, virtual memory

Also published in:

December 2003 **SIGOPS Operating Systems Review** Volume 37 Issue 5

6

TxLinux: using and managing hardware transactional memory in an

Christopher J. Rossbach, Owen S. Hofmann, Donald E. Porter, Hany E. Ran

October 2007 **SOSP '07: Proceedings of twenty-first ACM SIGOPS sympo****Publisher:** ACM Request Permissions

Full text available: Flv (31:17 MIN), Mp3 (13.15 MB), Pdf (324.16 KB) Additiona

Bibliometrics: Downloads (6 Weeks): 18, Downloads (12 Months): 213, Downl

TxLinux is a variant of Linux that is the first operating system to use ha primitive, and the first to manage HTM in the scheduler. This paper des

Keywords: MetaTM, TxLinux, operating systems, optimistic concurr

Also published in:

October 2007 **SIGOPS Operating Systems Review** Volume 41 Issue 6

7

Helios: heterogeneous multiprocessing with satellite kernels

Edmund B. Nightingale, Orion Hodson, Ross McIlroy, Chris Hawblitzel, Gale

October 2009 **SOSP '09: Proceedings of the ACM SIGOPS 22nd symposiu****Publisher:** ACM Request Permissions

Full text available: Pdf (474.21 KB)

Additional Information: full citati

Bibliometrics: Downloads (6 Weeks): 37, Downloads (12 Months): 103, Downl

Helios is an operating system designed to simplify the task of writing, d Helios introduces satellite kernels, which export a single, uniform set of

Keywords: heterogeneous computing, operating systems

8 The KaffeOS Java runtime system



Godmar Back, Wilson C. Hsieh

July 2005

Transactions on Programming Languages and Systems

Publisher: ACM [Request Permissions](#)

Full text available: [Pdf](#) (704.30 KB)

[Additional Information: full citation](#)

Bibliometrics: Downloads (6 Weeks): 18, Downloads (12 Months): 139, Downloads

Single-language runtime systems, in the form of Java virtual machines, code. These runtimes provide some of the features that operating systems

Keywords: Robustness, garbage collection, isolation, language runtime

9 Portably solving file races with hardness amplification



Dan Tsafir, Tomer Hertz, David Wagner, Dilma Da Silva

November 2008 **Transactions on Storage (TOS)**, Volume 4 Issue 3

Publisher: ACM [Request Permissions](#)

Full text available: [Pdf](#) (985.12 KB)

[Additional Information: full citation](#)

Bibliometrics: Downloads (6 Weeks): 7, Downloads (12 Months): 80, Downloads

The file-system API of contemporary systems makes programs vulnerable. Existing solutions either help users to detect these problems (by pinpoints)

Keywords: Race conditions, TOCTTOU, time-of-check-to-time-of-use

10 XMem: type-safe, transparent, shared memory for cross-runtime computing



Michael Wegiel, Chandra Krintz

June 2008

PLDI '08: Proceedings of the 2008 ACM SIGPLAN conference on Programming Language Design and Implementation

Publisher: ACM [Request Permissions](#)

Full text available: [Pdf](#) (254.76 KB)

[Additional Information: full citation](#)

Bibliometrics: Downloads (6 Weeks): 13, Downloads (12 Months): 110, Downloads

Developers commonly build contemporary enterprise applications using architectures that comprise multiple tiers, such as a web container, application server, and database. These architectures are increasingly becoming more complex and harder to manage.

Keywords: class loading, garbage collection, interprocess communication, synchronization, transparent, type-safe

Also published in:

May 2008 **SIGPLAN Notices** Volume 43 Issue 6

11 Fast and flexible application-level networking on exokernel systems



Gregory R. Ganger, Dawson R. Engler, M. Frans Kaashoek, Hector M. Bricie

February 2002

Transactions on Computer Systems (TOCS), Volume 20 Issue 1

Publisher: ACM [Request Permissions](#)


Full text available: [Pdf](#) (500.67 KB)

[Additional Information: full citation](#)


Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 68, Downloads

Application-level networking is a promising software organization for im services. The Xok/ExOS exokernel system includes application-level sup

Keywords: Extensible systems, OS structure, fast servers, network ser

- 12 Specialization tools and techniques for systematic optimization of sy:
 Dylan McNamee, Jonathan Walpole, Calton Pu, Crispin Cowan, Charles Kra:
 Renauld Marlet
 May 2001 **Transactions on Computer Systems (TOCS)** , Volume 19 I

Publisher: ACM  Request Permissions


Full text available:  Pdf (178.52 KB)

Additional Information: [full citati](#)


Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 73, Downloa

Specialization has been recognized as a powerful technique for optimizir
 broadly applied beyond the research community because current techni

Keywords: operating system specialization, optimization, software arc

- 13 A quantitative analysis of aspects in the eCos kernel
 Daniel Lohmann, Fabian Scheler, Reinhard Tartler, Olaf Spinczyk, Wolfgang
 April 2006 **EuroSys '06: Proceedings of the 1st ACM SIGOPS/EuroSys**

Publisher: ACM

Full text available:  Pdf (661.89 KB)

Additional Information: [full citati](#)

Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 70, Downlo

Nearly ten years after its first presentation and five years after its first i
Oriented Programming (AOP) for the development of operating system

Keywords: Aspect-Oriented Programming (AOP), AspectC++, Footprin

Also published in:

October 2006 **SIGOPS Operating Systems Review** Volume 40 Issue 4

- 14 Secure virtual enclaves: Supporting coalition use of distributed applic
 May 2001 **Transactions on Information and System Security (TI**

Publisher: ACM  Request Permissions


Full text available:  Pdf (462.10 KB)

Additional Information: [full citati](#)


Bibliometrics: Downloads (6 Weeks): 10, Downloads (12 Months): 85, Downlo

The Secure Virtual Enclaves (SVE) collaboration infrastructure allows m
 objects, while respecting organizational autonomy over local resources.

Keywords: Access control, coalition, collaborative system, group comm

- 15 CarTel: a distributed mobile sensor computing system
 Bret Hull, Vladimir Bychkovsky, Yang Zhang, Kevin Chen, Michel Goraczko,
 October 2006 **SenSys '06: Proceedings of the 4th international conferenc**

Publisher: ACM  Request Permissions

Full text available:  Pdf (2.04 MB)


Additional Information: [full citati](#)

Bibliometrics: Downloads (6 Weeks): 44, Downloads (12 Months): 326, Downl

CarTel is a mobile sensor computing system designed to collect, process units such as automobiles. A CarTel node is a mobile embedded comput


Keywords: data management, data visualization, implementation, inte networks

16 A survey of linguistic structures for application-level fault tolerance

 Vincenzo De Florio, Chris Blondia

April 2008 **Computing Surveys (CSUR)** , Volume 40 Issue 2

Publisher: ACM  Request Permissions

Full text available:  Pdf (2.23 MB)


Additional Information: full citati

Bibliometrics: Downloads (6 Weeks): 51, Downloads (12 Months): 438, Downl

Structures for the expression of fault-tolerance provisions in application techniques answer questions as to how to incorporate fault tolerance in

Keywords: Language support for software-implemented fault tolerance concerns, software fault tolerance

17 Coyote: a system for constructing fine-grain configurable communica

 Nina T. Bhatti, Matti A. Hiltunen, Richard D. Schlichting, Wanda Chiu

November 1998 **Transactions on Computer Systems (TOCS)** , Volume 16 I

Publisher: ACM  Request Permissions

Full text available:  Pdf (290.21 KB)

Additional Information: full citati

Bibliometrics: Downloads (6 Weeks): 4, Downloads (12 Months): 42, Downloa

Communication-oriented abstractions such as atomic multicast, group R can simplify the development of complex applications built on distribute


Keywords: x-kernal, configurable sevicees, customization, event handle mobile computing, modularity, multicast, protocols, remote procedure c

18 Rootkit-resistant disks

 Kevin R.B. Butler, Stephen McLaughlin, Patrick D. McDaniel

October 2008 **CCS '08: Proceedings of the 15th ACM conference on Comp**

Publisher: ACM  Request Permissions

Full text available:  Pdf (933.90 KB)


Additional Information: full citati

Bibliometrics: Downloads (6 Weeks): 22, Downloads (12 Months): 342, Downl


Rootkits are now prevalent in the wild. Users affected by rootkits are su unknowingly. Suchmalware becomes even more dangerous when it is p

Keywords: labels, rootkits, security, storage

19 Queue: Volume 6 Issue 2

 March 2008 **Queue**

Publisher: ACM

Full text available:  Digital Edition ,  Pdf (7.96 MB) Additional Information: full citation

Bibliometrics: Downloads (6 Weeks): 56, Downloads (12 Months): 208, Downl

20

IRIS performer: a high performance multiprocessing toolkit for real-ti



John Rohlfs, James Helman

July 1994

SIGGRAPH '94: Proceedings of the 21st annual conference**Publisher:** ACM[Request Permissions](#)**Full text available:**

Pdf (628.17 KB),



Ps (9.32 MB)

[Additional Information: full citation](#)**Bibliometrics:** Downloads (6 Weeks): 12, Downloads (12 Months): 85, Downloads

This paper describes the design and implementation of IRIS Performer, time 3D graphics applications. The principal design goal is to allow appli

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